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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/927,691	08/08/2001	Timothy J. Tautges	SD-6594.1	6477
20567	7590	12/23/2004	EXAMINER	
SANDIA CORPORATION P O BOX 5800 MS-0161 ALBUQUERQUE, NM 87185-0161			PHAN, THAI Q	
			ART UNIT	PAPER NUMBER
			2128	

DATE MAILED: 12/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/927,691

Applicant(s)

TAUTGES ET AL.

Examiner

Thai Q. Phan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/8/01 and 07/29/02</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is in response to patent application no. 09/927,691, filed on 08/08/2001. Claims 1-22 are pending in the present Action.

Drawings

The drawings, filed on 08/08/2001, are acceptable for examination.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-22 are rejected under 35 U.S.C. 102(b) as being anticipated by White et al., "Automatic scheme selection for toolkit hex meshing", Int. Journal Numer. Meth Engng 2000, pp. 127-144 (submitted IDS).

As per claim 1, White anticipates a method sweep meshable generation with feature limitations identical to the claimed invention. According to White, the method includes steps

Classifying surface mesh schemes for surfaces of the representation locally using surface vertex types (pages 129-131, Background and Definitions),

Grouping mappable and submappable surfaces of the representation into chains,

Computing volume edge types for the representation (pages 133-136),

Recursively traversing surfaces of the representation and grouping the surfaces into source, target, and linking surface lists, and

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Checking traversal direction when traversing onto linking surfaces (pages 134-136).

As per claim 2, White also anticipates conditions such as the claimed limitation for sweep meshable (pages 137-138).

As per claim 3, White anticipates a consistent ij parameterization (pages 130-131).

As per claim 4, White anticipates step of determining source/target surfaces sharing edges have a same non-traversed parameter with respect to linking surfaces bounding them (pages 130-131, 133).

As per claim 5, White anticipates globally consistent ij parameterization.

As per claim 6, White anticipates sweeping with feature limitations for meshable (pages 131, 133-134, for example).

As per claim 7, White anticipates traversing source/target surface over any two edges of a different edge type onto one or more linking surfaces results in traversing a non-traversal parameter in an opposite direction (pages 133-134).

As per claims 8-10, White anticipates the claimed limitations such end, side, corners, chain complete, chain condition for sweeping.

As per claim 11, White discloses lists for source and target surface for sweeping.

As per claim 12, White anticipates a computer software program for sweep meshable generation with feature limitations identical to the claimed invention.

According to White, the software program includes means:

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Classifying surface mesh schemes for surfaces of the representation locally using surface vertex types (pages 129-131, Background and Definitions),

Grouping mappable and submappable surfaces of the representation into chains,

Computing volume edge types for the representation (pages 133-136),

Recursively traversing surfaces of the representation and grouping the surfaces into source, target, and linking surface lists, and

Checking traversal direction when traversing onto linking surfaces (pages 134-136).

As per claim 13, White also anticipates the program including setting or determining conditions such as the claimed limitation for sweep meshable (pages 137-138).

As per claim 14, White anticipates a consistent ij parameterization (pages 130-131).

As per claim 15, White anticipates step of determining source/target surfaces sharing edges have a same non-traversed parameter with respect to linking surfaces bounding them (pages 130-131, 133).

As per claim 16 White anticipates globally consistent ij parameterization.

As per claim 17, White anticipates sweeping with feature limitations for meshable (pages 131, 133-134, for example).

As per claim 18, White anticipates traversing source/target surface over any two edges of a different edge type onto one or more linking surfaces results in traversing a non-traversal parameter in an opposite direction (pages 133-134).

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As per claims 19-21, White anticipates the claimed limitations such end, side, corners, chain complete and chain conditions for sweeping.

As per claim 22, White discloses lists for source and target surface for sweeping.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1. US patent no. 5,768,156, issued to Tautges et al, on June 1998

2. US patent no. 6,307,551 B1, issued to Gueziec et al, on Oct. 2001

3. US patent no. 6,825,839 B2, issued to Huang et al on Nov. 2004

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai Q. Phan whose telephone number is 571-272-3783.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jean Homere can be reached on 571-272-3780. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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5. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dec. 11, 2004



Thai Phan
Primary Examiner
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